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STUDENT REPORT

ANALYSIS OF AIR FORCE ACADEMY
NONREVENUE INTERCOLLEGIATE
ATHLETIC PROGRAM

MAJOR ROBERT R. THONN 86-2530
"insights into tomorrow"

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REPORT NUMBER 86-2530

TITLE ANALYSIS OF AIR FORCE ACADEMY NONREVENUE
INTERCOLLEGIATE ATHLETIC PROGRAM

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requirements for graduation.

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PREFACE

The Air Force Academy intercollegiate athletic program consists of 28 varsity sports, 18 men and 10 women. Faced with threatening budget cuts, the athletic administration requested an analysis of the current nonrevenue program, 25 sports excluding football, men's basketball, and ice hockey, to determine if it should continue to offer such a diverse and expansive program.

This study analyzes a variety of criteria, both objective and subjective, in an attempt to provide a broad evaluation of each sport. The data compiled is intended to assist the athletic administration in managing the current program and charting a course for the future.

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Major Bob Thonn was commissioned through ROTC and attended pilot training at Laughlin AFB. He was assigned to the Strategic Air Command as a KC-135Q crewmember at Beale AFB, where he flew as a copilot, aircraft commander, flight instructor, and evaluator pilot. He is a senior pilot with 2600 hours total flying time. He was assigned to the United States Air Force Academy Athletic Department in 1981. He served as a physical education instructor, intramural program manager, and intercollegiate baseball coach while at the Academy. Additionally, he served as the Executive Officer to the Athletic Director, responsible for the administration of all programs within the directorate. He also flew as a T-41 instructor in the Flight Screening Program. Major Thonn has a BA in Physical Education and a MA in Education Administration. He is a resident graduate of Squadron Officer School and Air Command and Staff College.

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REPORT NUMBER 86-2530

AUTHOR(S) MAJOR ROBERT R. THONN, USAF

TITLE ANALYSIS OF AIR FORCE ACADEMY NONREVENUE INTERCOLLEGIATE ATHLETIC PROGRAM

I. Purpose: To conduct a comprehensive analysis of the 25 nonrevenue athletic teams currently being offered in the Air Force Academy intercollegiate athletic program.

II. Problem: The Academy nonrevenue athletic program has expanded to 25 varsity sports since it began competing in 1955. Many factors have changed requiring a continued evaluation to update the program. The primary factor that affects this program is increasing budget constraints that could require eliminating some teams. A comprehensive analysis of what sports are offered and why will provide current administration with data necessary to manage this program in the future.

III. Data: Historically, Academy athletic teams have won 66 percent of all contests since it began competing in 1955. Cadets participating in the intercollegiate program represent approximately 25 percent of the cadet wing. The analysis of this expansive program focuses on the 25 nonrevenue sports, omitting football, men's basketball, and ice hockey. Each sport was evaluated in three major areas, cost effectiveness, availability of competition, and value and benefits derived from each sport.

Cost effectiveness factors include budget expenses and manpower costs. The budget expenses include equipment, travel, and special events. Manpower expenses include facility support and coaches assigned to each sport. A cost effectiveness figure, expressed as cost-per-cadet, combines total expenses and number of cadet participants in each sport. The second area examined

CONTINUED

is availability of competition which is critical in developing a competitive schedule. Academy teams compete nationally to gain exposure and visibility. They compete regionally, defined as within 600 miles, to limit travel expenses and academic time loss. As a member of the National Collegiate Athletic Association, the majority of the men's competition is in Division I and women's is in Division II. The value and benefits derived from each sport is based on three factors: cadet participation, potential for success, and potential for recognition. Cadet participation is an objective measurement, however, the other two factors are subjective and present a limitation to this study. The analysis of potential for success focused on five ingredients considered necessary for success of Academy teams: coaching, schedule, talent, environment, and historical records. The analysis of potential for recognition focused on regional and national media exposure gained through conference championships, national championships, and television coverage. The data compiled from each area is combined to provide a comparative analysis of each sport based on all factors.

IV. Recommendations: The results provide a broad and general basis for evaluating each sport. Some sports ranked consistently high against all criteria, for both men and women. However, other sports ranked poorly and are recommended for elimination. Also, it is recommended that a sport be added to the women's program. All decisions to add or delete a sport must be balanced with the stated goals and objectives of the athletic department and the institution.

Chapter One

HISTORY

The United States Air Force Academy has one of the most successful intercollegiate athletic programs of any college or university in the nation. Historically, Academy teams have won 66 percent of all intercollegiate contests since it began competing in 1955 (19:5a). The athletic program, combined with the military and academic programs, has made a vital contribution to the development of today's Air Force officer corps.

Upon passage of the Air Force Academy Act in 1954, a nation-wide publicity program was developed to acquaint the youth of America with the opportunities offered by the newly formed Air Force Academy. In an ABC-TV news release, Lieutenant General Hubert R. Harmon, the first Superintendent of the Academy, announced that selected talent scouts were sent to a great number of high schools in the country to seek "The Rhodes Scholarship type" of young men who had "intelligence, personality, and leadership." "However," said General Harmon, "we will not exclude a young man simply because he happens to have a little athletic prowess" (12:343). As a result of General Harmon's words, many scholar/athletes have competed in the Academy intercollegiate athletic program. In fact, seven Rhodes Scholars and 26 National Collegiate Athletic Association Scholarship winners have earned varsity letters in the Academy athletic program (19:65).

The intercollegiate athletic program was originally designed with two goals in mind. First, to offer the largest number of cadets an opportunity to participate in the widest range of sports. Second, provide the Wing of Cadets competitive opportunities which would develop qualities of leadership; specifically, the will to win, team spirit, morale, sportsmanship, cooperation, mental alertness, and physical fitness (12:350). There were 15 men's varsity teams in the first school year, and 14 of these teams still exist today (11:105-125). The 15 teams that competed in the first year were:

Football	Wrestling	Golf
Basketball	Swimming/Diving	Rifle
Baseball	Tennis	Pistol
Indoor Track	Gymnastics	Fencing
Soccer	Cross Country	Skiing

All of these sports still compete today except skiing, which was dropped in 1971 due to the lack of training facilities. Since that first year, four

additional men's varsity intercollegiate teams have been added, making today's total 18.

Outdoor Track - 1959
Lacrosse - 1966

Ice Hockey - 1968
Water Polo - 1971

A major expansion to the athletic program occurred in 1976 when women cadets attended the Academy for the first time. In the first year, nine varsity intercollegiate teams were established in the following sports (13:91-161):

Cross Country
Volleyball
Basketball

Fencing
Gymnastics
Swimming

Tennis
Indoor Track
Outdoor Track

In 1978, women's golf was added to bring today's total to ten teams.

Today's program of 28 varsity intercollegiate teams satisfies the two goals established in the summer of 1954, by offering a wide range of sports and providing competitive opportunities to develop leadership qualities. In the 1984-85 school year, 987 cadets, approximately 23 percent of the cadet wing, competed in 653 athletic contests in 33 different states (18:--). All cadets participating in the intercollegiate program are provided the opportunity to represent the Academy in conference championships, post season competition, regional and sectional tournaments, and National Collegiate Athletic Association (NCAA) Championships. To date, 228 cadets have been selected for All America honors for a total of 509 awards (19:66).

The athletic facilities that support this extensive program are some of the finest in the country, according to many visiting team coaches, players, and administrators. When the Academy moved to the present location from Lowrey AFB in 1958, the Cadet Gymnasium was not completed and the Cadet Fieldhouse was merely a dream on paper. Today, the outdoor athletic facilities consist of 143 acres, including, a 400 meter outdoor all-weather track, 33 tennis courts, 24 volleyball courts, three putting greens, two baseball diamonds, and a multitude of intramural multi-purpose fields. Falcon Stadium, completed in 1962, is the home of the Air Force Academy football team and seats more than 47,000 fans. Inside the Cadet Gymnasium are two swimming pools, 24 squash courts, 19 racquetball/handball courts, three multi-purpose gyms, a rifle and pistol range, two boxing rooms, a gymnastics room, and several multi-purpose rooms. The Cadet Fieldhouse, completed in 1968, contains a 1/6 mile tartan track surrounding an astro-turf multi-purpose field, a 6,600 seat basketball arena, and a 3,200 seat ice hockey rink. These facilities provide an excellent environment for conducting an intercollegiate athletic program.

With this brief historical account in mind, the following chapters examine and analyze the 25 nonrevenue intercollegiate programs by focusing on cost effectiveness, availability of competition, and value and benefits derived from each sport.

Chapter Two

COST EFFECTIVENESS

The focus of this paper is on the 25 nonrevenue intercollegiate teams, 15 men and 10 women. Since football, men's basketball, and ice hockey are considered revenue producing sports they are not included in this study.

The budget for the 25 nonrevenue intercollegiate teams totaled approximately \$250,000 in fiscal year 1985 (20:--). The expense budget of each individual sport includes equipment, travel, special events, and post season contests. Based on the fiscal year budget expenses and the number of cadets that participate in each sport, a cost effectiveness figure, expressed as cost-per-cadet, was developed. Cadet participation figures were obtained from the Assistant Athletic Director for Intercollegiate Programs (16:--). Table 2-1 shows the cost-per-cadet figure for each men's sport. This figure is based solely on budget expense items and does not include any support costs, which will be discussed later. Similarly, Table 2-2 shows the cost-per-cadet figures for each women's sport.

In addition to equipment, travel, special events, and post season contests, other factors contribute to the expense of supporting an extensive intercollegiate athletic program. Two significant factors examined are facility support manhours and coaching manpower. Neither of these factors are directly paid for from the nonrevenue intercollegiate athletic budget. However, when analyzing the cost effectiveness of the nonrevenue programs, these costs are significant. Since the Facility Support Division provides manhour support to all intercollegiate teams, priorities must be determined in order to manage the extensive workload. Data obtained from the Chief of the Facility Support Division indicates there is a large difference in the number of manhours required to support each sport (21:--). Both "on-season" and "off-season" facility support manhours are included. Thus, a major criteria in analyzing the intercollegiate program are the amount of facility support required for each team. Effective management of the facility support manhours is essential to the cost effectiveness of the entire athletic program.

Another critical manpower factor in determining cost effectiveness is the number of coaches assigned to each sport. All of the nonrevenue coaches also teach physical education classes and perform other duties in the department. The personnel authorizations for the department are not designated strictly for the nonrevenue coaches. Therefore, as long as the physical education curriculum remains the same, which for the purposes of this study is assumed, then the current number of personnel authorizations

must be maintained. However, the number of nonrevenue sports directly impacts how many coaches are assigned to each team. If the number of personnel remains the same but teams are deleted, then coaches will be available to assist in other sports. Essentially, the manpower costs remain the same, even if there is a change in the number of teams, but the effectiveness of the remaining teams will increase. It follows, then, that coaching manpower costs are a factor in analyzing the intercollegiate program.

Although these two manpower factors, facility support manhours and coaching manpower, are not directly paid from the nonrevenue intercollegiate budget, they are factors to be considered in analyzing the cost effectiveness of each sport. The manhour figures for both facility support and coaches have been converted to dollars to make comparisons easier. The Facility Support Division has a combination of civilian and military personnel of different rank and wage grade. For the purpose of this study, the hourly rate of a senior airman (E-3), as listed in AFR 171-13, has been used to convert manhours to dollars (15:Table 3-4). In the same manner, coaches assigned to each sport are expressed in a dollar figure by using the annual basic pay rate of a Captain, taken from AFR 171-13 (15:Table 3-3). Tables 2-3 and 2-4 show the total dollar amount of facility support manhours and coaching manpower for the men and women teams, respectively.

It is important to note, there are other expenses required to support the intercollegiate program, such as facility maintenance, equipment repair, supply, and administrative support. However, due to the overlapping nature of these areas, no attempt is made to determine the support received by each sport.

To provide a more complete cost analysis, the data from the budget expense tables are combined with the support cost tables. These factors are given equal weight. The results of combining the cost factors provides a total budget figure. It is important to remember that these figures do not represent a dollar amount spent by the Athletic Department. It is simply a way of presenting budget dollars and support costs for the purpose of comparison. The figures are an estimate only, and do not represent an official appropriated budget figure.

The total budget figures do not depict the entire cost effectiveness picture. The factor that drastically impacts the final cost-per-cadet figure is the number of cadet participants in each sport. Obviously, the higher the number of cadets the lower cost-per-cadet. Tables 2-5 and 2-6 show the cost-per-cadet figures for men and women respectively. The sports are listed in rank order in terms of cost-per-cadet. The purpose of computing this figure is to present an objective comparison of costs for each program. The cost effectiveness figures compiled in this chapter are only one factor used in evaluating the intercollegiate program.

<u>SPORT</u>	<u>BUDGET*</u>	<u>CADETS</u>	<u>COST-PER-CADET</u>
CROSS COUNTRY	\$2,740	20	\$137
WRESTLING	\$8,484	38	\$223
GYMNASTICS	\$4,076	18	\$226
INDOOR TRACK	\$7,004	30	\$233
LACROSSE	\$11,236	45	\$250
SOCCER	\$11,304	44	\$257
OUTDOOR TRACK	\$9,695	35	\$277
PISTOL	\$4,906	17	\$289
FENCING	\$16,168	50	\$323
BASEBALL	\$14,429	40	\$361
RIFLE	\$6,667	18	\$370
WATER POLO	\$14,485	24	\$604
SWIMMING/DIVING	\$17,032**	40	\$426
TENNIS	\$11,398	16	\$712
GOLF	\$9,693	11	\$881

* Budget includes travel, equipment, special events, and post season travel.

** Does not include \$11,003 of post season travel to Hawaii because it is atypical of normal annual budget.

TABLE 2-1
NONREVENUE
INTERCOLLEGIATE BUDGETS - MEN

<u>SPORT</u>	<u>BUDGET*</u>	<u>CADETS</u>	<u>COST-PER-CADET</u>
INDOOR TRACK	\$3,339	30	\$111
OUTDOOR TRACK	\$4,307	35	\$123
CROSS COUNTRY	\$5,862	19	\$309
SWIMMING/DIVING	\$7,975	25	\$319
TENNIS	\$4,659	12	\$388
FENCING	\$4,782	10	\$478
GOLF	\$6,004	11	\$546
VOLLEYBALL	\$12,534	20	\$627
GYMNASTICS	\$11,685	17	\$687
BASKETBALL	\$24,515	17	\$1,442

* Budget includes travel, equipment, special events, and post season travel.

TABLE 2-2
NONREVENUE
INTERCOLLEGIATE BUDGETS - WOMEN

<u>SPORT</u>	<u>FACILITY MANHOURS</u>	<u>FACILITY \$\$\$\$\$*</u>	<u>COACHES</u>	<u>\$\$\$\$\$**</u>	<u>TOTAL \$\$\$\$</u>
GOLF	48	\$420	1	\$27,258	\$27,678
OUTDOOR TRACK	55	\$482	2	\$54,516	\$54,998
RIFLE	64	\$561	1	\$27,258	\$27,819
PISTOL	72	\$631	1	\$27,258	\$27,889
WATER POLO	105	\$920	2	\$54,516	\$55,436
CROSS COUNTRY	110	\$964	1	\$27,258	\$28,222
INDOOR TRACK	134	\$1,174	2	\$54,516	\$55,690
SWIMMING/DIVING	150	\$1,314	2	\$54,516	\$55,830
TENNIS	154	\$1,349	2	\$54,516	\$55,865
LACROSSE	216	\$1,892	2	\$54,516	\$56,408
SOCCER	312	\$2,733	2	\$54,516	\$57,249
WRESTLING	688	\$6,027	2	\$54,516	\$60,543
FENCING	800	\$7,008	2	\$54,516	\$61,524
BASEBALL	1,206	\$10,565	2	\$54,516	\$65,081
GYMNASTICS	1,472	\$12,895	2	\$54,516	\$67,411

* Senior Airman (E-3) hourly rate taken from AFR 171-13; \$8.76/hr.

** Captain basic annual pay taken from AFR 171-13; \$27,258/yr.

TABLE 2-3
NONREVENUE
INTERCOLLEGIATE SUPPORT COSTS - MEN

<u>SPORT</u>	<u>FACILITY MANHOURS</u>	<u>FACILITY \$\$\$\$\$*</u>	<u>COACHES</u>	<u>\$\$\$\$\$**</u>	<u>TOTAL \$\$\$\$</u>
GOLF	48	\$420	1	\$27,258	\$27,678
CROSS COUNTRY	110	\$964	1	\$27,258	\$28,222
TENNIS	154	\$1,349	1	\$27,258	\$28,607
VOLLEYBALL	604	\$5,291	1	\$27,258	\$32,549
FENCING	800	\$7,008	1#	\$27,258	\$34,266
OUTDOOR TRACK	55	\$482	2	\$54,516	\$54,998
BASKETBALL	118	\$1,034	2	\$54,516	\$55,550
INDOOR TRACK	134	\$1,174	2	\$54,516	\$55,690
SWIMMING/DIVING	150	\$1,314	2#	\$54,516	\$55,830
GYMNASTICS	1,472	\$12,895	2	\$54,516	\$67,411

* Senior Airman (E-3) hourly rate taken from AFR 171-13; \$8.76/hr.

** Captain basic annual pay taken from AFR 171-13; \$27,258/yr.

Coaches shared with men's teams.

TABLE 2-4
NONREVENUE
INTERCOLLEGIATE SUPPORT COSTS - WOMEN

<u>SPORT</u>	<u>BUDGET*</u>	<u>SUPPORT\$\$**</u>	<u>TOTAL</u>	<u>CADETS</u>	<u>COST-PER-CADET</u>
LACROSSE	\$11,236	\$56,408	\$67,644	45	\$1,503
CROSS COUNTRY	\$2,740	\$28,222	\$30,962	20	\$1,548
FENCING	\$16,168	\$61,524	\$77,692	50	\$1,554
SOCCER	\$11,304	\$57,249	\$68,553	44	\$1,558
WRESTLING	\$8,484	\$60,543	\$69,027	38	\$1,817
SWIMMING/DIVING	\$17,032	\$55,830	\$72,862	40	\$1,822
OUTDOOR TRACK	\$9,695	\$54,998	\$64,693	35	\$1,848
RIFLE	\$6,667	\$27,819	\$34,486	18	\$1,916
PISTOL	\$4,906	\$27,889	\$32,795	17	\$1,929
BASEBALL	\$14,429	\$65,081	\$79,510	40	\$1,988
INDOOR TRACK	\$7,004	\$55,690	\$62,694	30	\$2,090
WATER POLO	\$14,485	\$55,436	\$69,921	24	\$2,913
GOLF	\$9,693	\$27,678	\$37,371	11	\$3,397
GYMNASTICS	\$4,076	\$67,411	\$71,487	18	\$3,972
TENNIS	\$11,398	\$55,865	\$67,263	16	\$4,204

* Figures taken from Table 2-1

** Figures taken from Table 2-3

TABLE 2-5
COST-PER-CADET - MEN

<u>SPORT</u>	<u>BUDGET*</u>	<u>SUPPORT\$\$**</u>	<u>TOTAL</u>	<u>CADETS</u>	<u>COST-PER-CADET</u>
OUTDOOR TRACK	\$4,307	\$54,998	\$59,305	35	\$1,694
CROSS COUNTRY	\$5,862	\$28,222	\$34,084	19	\$1,794
INDOOR TRACK	\$3,339	\$55,690	\$59,029	30	\$1,968
VOLLEYBALL	\$12,534	\$32,549	\$45,083	20	\$2,254
SWIMMING/DIVING	\$7,975	\$55,830	\$63,805	25	\$2,552
TENNIS	\$4,659	\$28,607	\$33,266	12	\$2,772
GOLF	\$6,004	\$27,678	\$33,682	11	\$3,062
FENCING	\$4,782	\$34,266	\$39,048	10	\$3,905
GYMNASTICS	\$11,685	\$67,411	\$79,096	17	\$4,653
BASKETBALL	\$24,515	\$55,550	\$80,065	17	\$4,710

* Figures taken from Table 2-2

** Figures taken from Table 2-4

TABLE 2-6
COST-PER-CADET - WOMEN

Chapter Three

AVAILABILITY OF COMPETITION

A key ingredient in developing an intercollegiate athletic program is the availability of competition, both nationally and regionally. National competition is important because it provides opportunities for exposure and visibility of Academy athletic programs. The Academy recruits top scholar/athletes from throughout the United States and must attempt to reach as many states as possible in order to spread the word on the athletic opportunities available at the Academy. Therefore, it is critical that Academy teams compete throughout the country, even though this requires an extensive travel budget.

As a result of budget constraints that prohibit unlimited national travel, it is critically important that regional competition be available for each intercollegiate team. For this study, regional competition is defined as being within approximately 600 miles of the Academy. According to Major Jim Andrus, the Assistant Athletic Director for Intercollegiate Programs, this distance was determined to be the maximum distance an intercollegiate team would travel by ground transportation (16:--). Another important reason for regional competition is the academic time loss restrictions placed on Academy teams. Each team schedule is developed with different academic time loss restrictions, and having regional competition is an advantage in complying with these restrictions. Academic time loss restrictions affect "on-season" and "off-season" schedules, but this study analyzes only the "on-season" schedules.

Several factors affect the development of each sport's competition schedule. Two significant factors are the Divisions within the NCAA and certain conference affiliations. The first factor in determining athletic competition is the membership divisions within the NCAA. According to the NCAA manual "each active member institution shall be designated as a member of Division I, Division II, or Division III for certain legislative and competitive purposes" (5:127). This manual further states that an institution's women's program may be classified in a division other than the men's membership division (5:127). The general criteria used for determining eligibility in any division is compliance with athletic scholarship restrictions and sponsoring a minimum number of varsity intercollegiate sports. The exact criteria is listed in the NCAA manual and is too extensive and does not need an explanation for this study. The important point is that the Academy is designated Division I for men, and Division II for women. The effect of this designation does not restrict any nonrevenue teams from competing against other divisions, either men or women. However, it does affect national championship competition. All men's teams must compete in

Division I national championships. The women's teams must compete in Division II national championships, and may compete in Division I championships, if qualified.

The second factor that determines the athletic schedule is whether or not a team participates in an athletic conference. At the Academy, eight nonrevenue men's teams participate in the Western Athletic Conference (WAC).

Baseball	Swimming
Cross Country	Golf
Indoor Track	Tennis
Outdoor Track	Wrestling

Each of these teams must compete in the conference championships, as directed in the WAC Codebook (14:25). However, in baseball, regular season contests between the other conference institutions are required and must receive first priority before competition with other nonconference institutions can be scheduled. The other seven conference teams may schedule contests between other members, but it is not mandatory. Similarly, the women's teams have competition rules in the Continental Divide Conference (CDC). Four Academy teams compete in this conference; basketball, volleyball, tennis, and swimming. Basketball and volleyball must give priority to conference competition before scheduling any nonconference contests. Tennis and swimming must only compete in the end of season tournament and may schedule contests with other members, if desired (1:13).

Given these scheduling factors, the availability of national and regional competition is analyzed primarily in Division I for men and Division II for women. There are a total of 797 institutions listed in the NCAA Directory, 284 which are active in Division I and 191 in Division II (3:127-136). Up to this point, competition has only been discussed with other NCAA institutions. However, the National Association of Intercollegiate Athletics (NAIA) also provides intercollegiate competition for smaller institutions throughout the country. The NAIA consists of approximately 480 four year accredited colleges of small and moderate enrollment. The NAIA philosophy is "to develop intercollegiate athletic programs as an integral part of the total educational program of the college rather than as a separate commercial or promotional adjunct" (2:1640). NAIA members only compete in one division, unlike the NCAA divisions. Despite the difference in enrollment and philosophy, the NAIA provides intercollegiate competition for Academy teams. For this study, NAIA competition is analyzed on the regional level only.

On a national level, institutions that sponsor a particular sport are listed in the NCAA Sports Sponsorship Handbooks (6:-- , 7:-- , 8:--). These handbooks show what schools offer what sports in each of three competitive seasons, fall, winter, and spring. The availability of national competition is presented as a percentage of schools that offer each sport, as shown in Table 3-1 for men and Table 3-2 for women. As discussed earlier, budget constraints and academic time loss restrictions do not permit Academy teams unlimited national travel. Therefore, regional competition is a critical factor in analyzing availability of competition.

The first step in analyzing regional competition is to determine which institutions are within an approximate 600 mile radius of the Academy. The map shown in Figure 3-1 shows the major cities included in the 600 mile radius. Using this map and the NCAA and NAIA Directories, institutions within 600 miles can be determined (3:38-101; 4:42-93). A complete list of NCAA institutions, by division, is shown in Table 3-3. The availability of competition is shown as a percentage in Tables 3-1 and 3-2 for men and women, respectively. Since some Academy teams compete against other divisions, this percentage is also shown for both men and women. The rank order of teams is based on the available competition within the NCAA. The regional competition against the NAIA schools is shown for information purposes only.

In computing this data, equal weight was given to both the national and regional availability of competition. Weighted factors were not used due to the importance placed on national exposure and visibility for recruiting as well as regional competition due to budget constraints.

The data indicates a close correlation between national and regional participation. The sports that have a high percentage of national participation also have a high percentage of regional participation. The last four men's sports in Table 3-1 have a common problem in that the majority of the institutions that sponsor the sport are geographically restricted. In water polo, for example, the southwest, specifically California, has a predominant number of participating institutions. Likewise, in fencing, lacrosse and pistol, there is a significant amount of competition located on the east coast. This type of geographical restriction is a negative factor in scheduling competition.

Availability of competition is a significant factor in evaluating an intercollegiate athletic program. Analyzed alone, however, this data does not provide a complete examination of all important factors. The cost effectiveness, as previously discussed, combined with the availability of competition examined in this chapter provides only a partial review. The next chapter analyzes three other areas that contribute to the value and benefits derived from each sport.

	NATIONAL DIV. I 98%	REGIONAL DIV. I 100%	REGIONAL DIV. II&III 66%	REGIONAL NAIA 53%
CROSS COUNTRY				
TENNIS	97%	92%	80%	48%
GOLF	94%	96%	60%	56%
OUTDOOR TRACK	83%	96%	80%	66%
BASEBALL	93%	71%	87%	61%
INDOOR TRACK	78%	88%	73%	61%
SWIMMING/DIVING	62%	46%	40%	0
WRESTLING	48%	50%	47%	19%
SOCCER	66%	17%	33%	23%
RIFLE	31%	17%	*	0
GYMNASTICS	23%	17%	*	0
WATER POLO	19%	4%	*	0
LACROSSE	19%	0	7%	0
FENCING	24%	0	*	0
PISTOL	10%	0	*	0

* Only one division in NCAA

Column 1 - 284 Division I institutions

Column 2 - 24 Division I institutions within 600 miles

Column 3 - 15 Division II and III institutions within 600 miles

Column 4 - 64 NAIA institutions within 600 miles

TABLE 3-1
AVAILABILITY OF COMPETITION - MEN

	NATIONAL DIV. II 92%	REGIONAL DIV. II 100%	REGIONAL DIV. II&III 100%	REGIONAL NAIA 83%
VOLLEYBALL				
BASKETBALL	93%	91%	93%	97%
TENNIS	81%	73%	80%	30%
CROSS COUNTRY	81%	55%	66%	42%
OUTDOOR TRACK	61%	64%	73%	55%
INDOOR TRACK	42%	64%	66%	48%
SWIMMING/DIVING	38%	55%	60%	0
GYMNASTICS	37%	9%	7%	1%
GOLF	*76%	20%	20%	0%
FENCING	*35%	0	0	0

* Division I percentages only

Column 1 - 191 Division II institutions

Column 2 - 11 Division II institutions within 600 miles

Column 3 - 15 Division II and III institutions within 600 miles

Column 4 - 64 NAIA institutions within 600 miles

TABLE 3-2
AVAILABILITY OF COMPETITION - WOMEN

DIVISION I

Brigham Young Univ.	Nebraska, Univ. of	Tulsa, Univ. of
Colorado, Univ. of	New Mexico, Univ. of	Utah, Univ. of
Colorado State Univ.	New Mexico State Univ.	Utah State Univ.
Creighton Univ.	Northern Arizona Univ.	Univ. of Texas El Paso
Drake Univ.	Oklahoma, Univ. of	Weber State College
Iowa State Univ.	Oklahoma State Univ.	West Texas State Univ.
Kansas, Univ. of	Oral Roberts Univ.	Wichita State Univ.
Kansas State Univ.	Texas Tech Univ.	Wyoming, Univ. of

DIVISION II

Augustana College, SD	Nebraska, Univ. of, Omaha
Colorado School of Mines	Northern Colorado, Univ. of
Denver, Univ. of	Regis College
Eastern New Mexico Univ.	South Dakota, Univ. of
Metropolitan State College	Western State College
Morningside College	-

DIVISION III

Buena Vista College
Colorado College
Nebraska Wesleyan Univ.
Simpson College

TABLE 3-3
NCAA REGIONAL COMPETITION
(WITHIN 600 Miles)

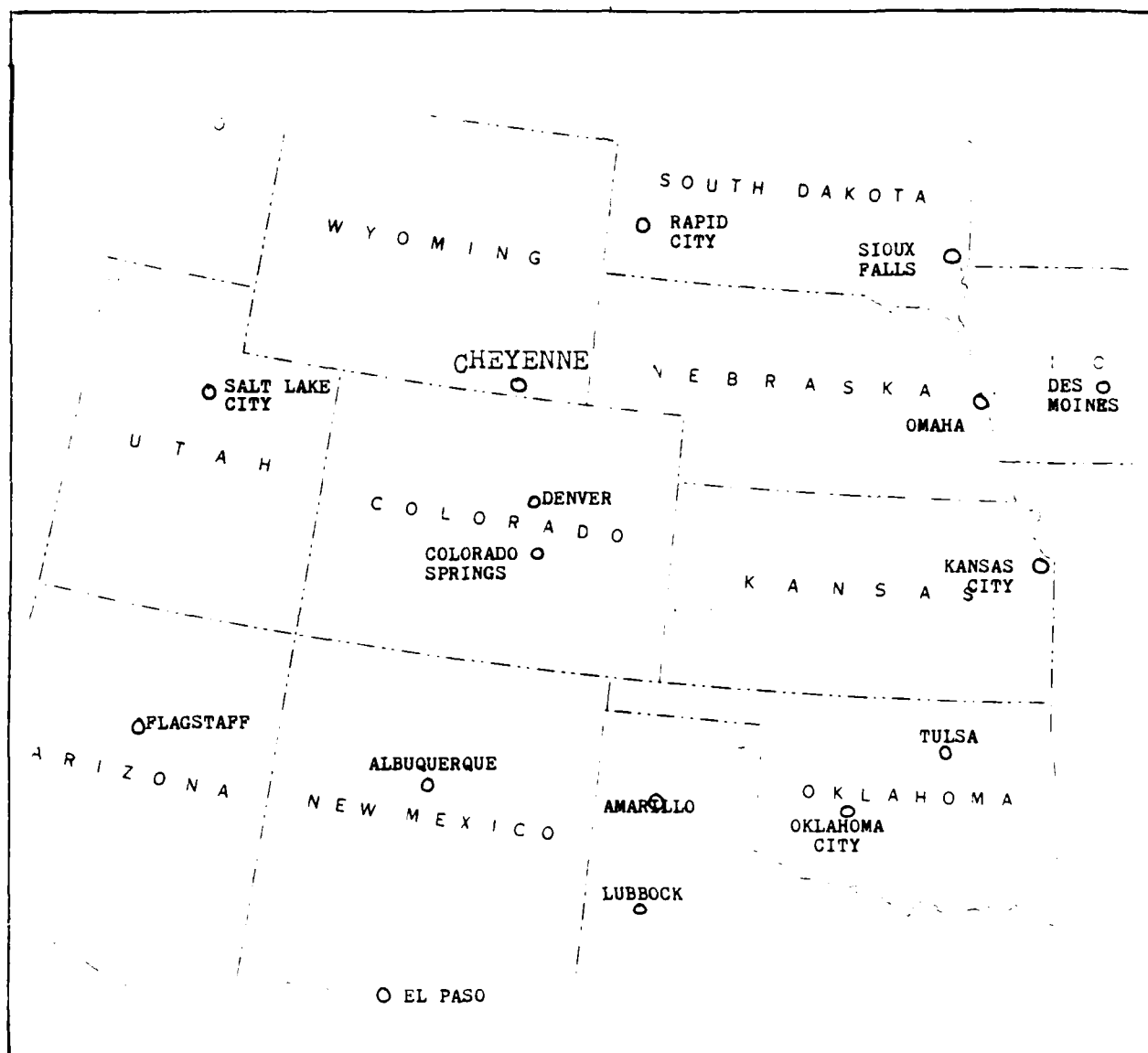


FIGURE 3-1
REGIONAL COMPETITION
MAJOR CITIES WITHIN 600 MILES

Chapter Four

VALUE AND BENEFITS

The stated objectives of "the athletic department" serve as a backbone in developing the "intercollegiate program". This statement of objectives must be consonance with the purpose and objectives of the institution and practiced in the conduct of athletic programs. The objective that best explains the Academy's intercollegiate athletic program today, as stated by the current Athletic Director, Colonel John Clune, is to "produce Warriors and Winners" (17:--). Although this is a simplified statement, it provides essential guidance for developing the intercollegiate athletic program. This chapter will analyze three key areas; cadet participation, potential for success, and potential for national recognition, to determine the value and benefits each sport contributes toward accomplishing this objective.

Admittedly, this is a subjective evaluation. Certainly no one set of criteria or measures can be applied as a procedure for evaluation. The areas examined were selected after extensive discussions with Academy athletic department personnel, athletic personnel from other institutions, as well as personal observations and experiences. This analysis is not intended as a simple black and white evaluation, but provides supporting information in every possible instance. It is important to remember that this subjective analysis of the value and benefits of each sport is only one aspect of a comprehensive evaluation. As previously discussed, cost effectiveness and availability of competition are other key factors in the total evaluation of the Academy intercollegiate program.

The first area, arguably one of the most important, is cadet participation in each sport. As stated in Chapter One, the Academy athletic program was originally designed to offer the largest number of cadets an opportunity to participate in intercollegiate athletics. Athletic teams that promote the interests and welfare of the cadets and include as much of the cadet wing as possible contribute to achieving the stated department objective. Obviously, the nature of each sport dictates the number of cadets involved. However, it is important to recognize how the number of participants in each sport fits into the overall picture of the athletic program. Table 4-1 shows men's team strengths, by sport, and the percentages of total cadets among the 25 nonrevenue teams. As previously discussed, football, men's basketball, and ice hockey are excluded from this study. Table 4-2 shows the same statistics for the ten women's intercollegiate teams. This data is useful in analyzing the impact of cadet participation on the overall nonrevenue program. Also, a decision to eliminate a particular sport would impact other athletic department programs, such as intramurals.

The second critical area examined to determine the value and benefits derived from an intercollegiate sport is the potential for success. This is a very broad and subjective area that is not easily predicted. However, according to Colonel Clune, four critical ingredients of success are: coaching, scheduling, talent, and environment (17:--). A fifth area, historical record, is also examined to provide more data for comparing the potential for success of each team.

The first ingredient, coaching, is an extremely important factor in the success of any athletic team. All coaches are screened and interviewed before assignment to the Academy. Those hired are highly qualified in their specialty. A critical aspect of coaching is the amount of time a coach can dedicate to a sport to accomplish all the responsibilities associated with managing an intercollegiate team. A constant problem expressed by many Academy coaches is the time spent on other duties such as teaching, divisional responsibilities, and department additional duties. Despite department policies that balance the additional workloads, they seriously detract from time available for coaching responsibilities. This problem seems to exist for all sports. Recruiting and scheduling duties, for example, are time intensive activities that require many hours of telephone work and travel.

This coaching-time problem seems best resolved by reducing the number of sports. As discussed in a previous chapter, a reduction in the number of teams would not require a reduction of coaches, due to the physical education instruction requirements. Therefore, more coaches could be assigned to the remaining teams and increase the potential for success.

The second ingredient for success is scheduling. As previously mentioned, availability of competition, both nationally and regionally, is a key in developing a strong competitive schedule. Since this topic has already been analyzed in depth, a lengthy discussion is unnecessary. However, it is important to point out that in addition to availability of competition, scheduling the right combination of opponents is equally important. A coach must ensure his team is competing against "good" competition to gain experience, and not simply to look good in the won/loss column. Developing a competitive schedule is a critical factor in progressing to higher levels of competition and the success of a team.

A third ingredient for success is talent. The Academy recruits top scholar/athletes from around the country and has some inherent restrictions that make this a very difficult task. The academic entrance requirements, commitment after graduation, and quotas of pilot qualified cadets are the major restrictions. An analysis of these restrictions would entail another research project in itself, and is out of the realm of this study. However, a thorough examination of the high school athletic programs throughout the country provides insight into the pool of talent available in each sport. A 1985 sports participation survey, conducted by the National Federation of State High School Associations, shows competition at the high school level in the 1984-85 school year (10:78). The data presented in Tables 4-3 and 4-4

indicates the number of high schools that participate in each sport, based on approximately 20,000 high schools in the country. Also shown is the number of colleges, Division I for men and Division II for women, that compete in each sport. Finally, Column Three provides a ratio of the number of high schools and colleges that sponsor each sport. This ratio is significant when comparing available talent for each sport and is used to provide a rank order of all sports. This data does not imply that large numbers of high school athletes in a given sport equates to success at the college level. In fact, having one or two "blue-chip" athletes on a team, regardless of how many are available, could lead to success for that team. This data merely shows that high school talent is one factor, among many, that can contribute to the success of a particular team.

The fourth ingredient important to the success of an athletic team is the environment. The environment is a big umbrella that encompasses many things, but primarily involves an attitude or feeling among team members that encourages dedication and commitment. It is not easily defined or measured, but equates to high morale and high retention of cadet athletes. Each sport is faced with its own unique challenges and hurdles and must create an environment conducive to overcoming these obstacles. The athletic administration contributes to this environment by being responsive and supportive to each team's particular requirements.

The final ingredient examined is the historical records of each team. It has already been stated that Academy teams have won approximately 66 percent of all intercollegiate contests. A closer look at individual team records reveals some teams have a higher winning percentage than others. Also, historical data shows some sports have been nationally ranked in the top ten more often than others. Although these historical factors alone would not be valid in predicting the future success of a team, they provide a perspective of how each sport has done compared to other Academy teams. Tables 4-5 and 4-6 show the winning percentage for each team and also, the number of times each team was ranked among the top ten in the nation (1940-62).

As seen in this discussion on potential for success, most of the factors are subjective and extremely hard to measure. This problem is certainly a limiting factor in this study. However, two objective measurements, available talent and historical records, provide some means of ranking and comparing the different sports. Table 4-7 and 4-8 combine the data from Tables 4-3 and 4-4, high school talent, with the data from Tables 4-5 and 4-6, historical records, and rank orders each sport for men and women, respectively. Potential for success is the second of three areas examined to determine the value and benefit derived from each sport. The third area is potential for recognition.

Closely related to success, since success precedes it, is the potential for regional and national prominence and recognition. Obtaining recognition directly involves being successful enough to qualify for regional and national competition. One factor that contributes to this process is competition in a conference that leads to winning a conference championship.

In baseball, for example, winning the WAC championship automatically qualifies a team for the NCAA Championship Tournament. Similarly, women's basketball and volleyball have automatic qualification to the national tournament through the Continental Divide Conference. It follows that sports competing in a conference have a better opportunity for regional recognition and possibly national recognition.

A closely related factor that contributes to the potential for national recognition is the conduct of national championship competition. The NCAA conducts Division I national championships in all Academy men's sports except pistol, which is not an NCAA sanctioned sport (9:1). The National Rifle Association conducts collegiate pistol championships. The NCAA conducts Division II national championships in eight of ten women's sports sponsored by the Academy. The two exceptions are fencing and golf, which have a Division I national championship only. This is a disadvantage for the Academy women since they have to participate at the higher level to obtain recognition.

A final factor that contributes to the potential for national recognition is media coverage. Obviously, getting to the championships is easier said than done, but if Academy teams or individuals are successful enough to qualify, the sports that have television coverage have a higher potential for visibility and recognition. Many of the men and women championship competitions are covered live by a national or cable television network. Other sports receive a "feature" or condensed coverage. Table 4-9 for men and 4-10 for women summarize all three factors that contribute to regional and national recognition. Based on these factors, the sports are ranked, as shown, indicating which sport has the highest potential for recognition.

If analyzed independently, none of the three areas discussed in this chapter--cadet participation, potential for success, and potential for recognition--would provide enough information to effectively evaluate an intercollegiate program. Even when analyzed together, it is not all inclusive. Nonetheless, Tables 4-11 and 4-12 combine all three areas to provide a comprehensive analysis. All sports, in each of the three areas, were ranked from top to bottom. All ties were assigned the same rank order number and the next rank order number, or numbers, were skipped. All three areas were given equal weight in this analysis.

Thus far, the three areas--budget, availability of competition, and value and benefits--have been analyzed separately. The next chapter consolidates all this data and provides some findings and recommendations.

<u>SPORT</u>	<u>TEAM STRENGTH</u>	<u>PERCENT OF ATHLETES</u>
FENCING	50	11.2%
LACROSSE	45	10%
SOCCER	44	9.9%
BASEBALL	40	9.0%
SWIMMING/DIVING	40	9.0%
WRESTLING	38	8.5%
OUTDOOR TRACK	35	7.8%
INDOOR TRACK	30	6.7%
WATER POLO	24	5.4%
CROSS COUNTRY	20	4.5%
GYMNASTICS	18	4.0%
RIFLE	18	4.0%
PISTOL	17	3.8%
TENNIS	16	3.6%
GOLF	11	2.5%
TOTAL	<u>446</u>	

TABLE 4-1
CADET PARTICIPATION - MEN

<u>SPORT</u>	<u>TEAM STRENGTH</u>	<u>PERCENT OF ATHLETES (NONREVENUE)</u>
OUTDOOR TRACK	35	17.9%
INDOOR TRACK	30	15.3%
SWIMMING/DIVING	25	12.8%
VOLLEYBALL	20	10.2%
CROSS COUNTRY	19	9.7%
BASKETBALL	17	8.7%
GYMNASTICS	17	8.7%
TENNIS	12	6.1%
GOLF	11	5.6%
FENCING	10	5.1%
TOTAL	<u>196</u>	

TABLE 4-2
CADET PARTICIPATION - WOMEN

<u>SPORT</u>	<u>NO. HIGH SCHOOLS/ PERCENT*</u>	<u>DIVISION I COLLEGES</u>	<u>RATIO H.S./DIV I</u>
WRESTLING	8,722/44%	137	64:1
OUTDOOR TRACK	14,566/73%	236	62:1
BASEBALL	14,041/70%	263	53:1
CROSS COUNTRY	9,776/49%	277	35:1
GOLF	9,180/46%	265	35:1
TENNIS	8,766/44%	274	32:1
SOCCER	5,747/29%	188	31:1
SWIMMING/DIVING	3,844/19%	176	22:1
LACROSSE	488/ 2%	53	9:1
INDOOR TRACK	1,241/ 6%	221	6:1
GYMNASTICS	397/ 2%	65	6:1
WATER POLO	304/1.5%	53	6:1
RIFLE	199/ 1%	88	2:1
FENCING	37/ 1%	67	.6:1
PISTOL	0	10	0
* Approximately 20,000 High Schools nationwide			

TABLE 4-3
HIGH SCHOOL PARTICIPATION - MEN

<u>SPORT</u>	<u>NO. HIGH SCHOOLS/ PERCENT*</u>	<u>DIVISION II SCHOOLS</u>	<u>RATIO H.S./DIV II</u>
OUTDOOR TRACK	13,923/70%	116	120:1
BASKETBALL	17,047/85%	177	96:1
VOLLEYBALL	12,460/62%	175	71:1
CROSS COUNTRY	8,458/42%	154	55:1
TENNIS	8,382/42%	154	54:1
SWIMMING/DIVING	3,829/19%	72	53:1
GYMNASTICS	2,159/11%	71	30:1
GOLF	3,352/17%	145	23:1
INDOOR TRACK	897/ 4%	80	11:1
FENCING	22/ 1%	67	.3:1
* Approximately 20,000 High Schools nationwide			

TABLE 4-4
HIGH SCHOOL PARTICIPATION - WOMEN

<u>SPORT</u>	<u>WINNING PERCENTAGE</u>	<u>NO. OF TOP TEN NATIONAL RANKINGS</u>
PISTOL	87%	18
FENCING	84%	8
CROSS COUNTRY	64%	5
GYMNASTICS	68%	4
RIFLE	82%	1
WATER POLO	59%	3
SOCCER	62%	1
WRESTLING	56%	1
GOLF	85%	
SWIMMING/DIVING	83%	
INDOOR TRACK	82%	
LACROSSE	79%	
TENNIS	67%	
OUTDOOR TRACK	61%	
BASEBALL	54%	

TABLE 4-5
SPORTS RECORDS - MEN

<u>SPORT</u>	<u>WINNING PERCENTAGE</u>	<u>NO. OF TOP TEN NATIONAL RANKINGS</u>
CROSS COUNTRY	96%	6
SWIMMING/DIVING	93%	5
GYMNASTICS	65%	3
INDOOR TRACK	80%	1
VOLLEYBALL	67%	1
OUTDOOR TRACK	72%	
GOLF	71%	
FENCING	68%	
BASKETBALL	67%	
TENNIS	63%	

TABLE 4-6
SPORTS RECORDS - WOMEN

<u>SPORT</u>	<u>HIGH SCHOOL TALENT*</u>	<u>SPORTS RECORD**</u>	<u>TOTAL</u>
CROSS COUNTRY	4	3	7
WRESTLING	1	8	9
GOLF	4	9	13
GYMNASTICS	10	4	14
SOCCER	7	7	14
WATER POLO	10	6	16
FENCING	14	2	16
PISTOL	15	1	16
OUTDOOR TRACK	2	14	16
RIFLE	13	5	18
SWIMMING/DIVING	8	10	18
BASEBALL	3	15	18
TENNIS	6	13	19
INDOOR TRACK	10	11	21
LACROSSE	9	12	21
* Taken from Table 4-3			
** Taken from Table 4-5			

TABLE 4-7
POTENTIAL FOR SUCCESS - MEN

<u>SPORT</u>	<u>HIGH SCHOOL TALENT*</u>	<u>SPORTS RECORD**</u>	<u>TOTAL</u>
CROSS COUNTRY	4	1	5
OUTDOOR TRACK	1	6	7
VOLLEYBALL	3	5	8
SWIMMING/DIVING	6	2	8
GYMNASTICS	7	3	10
BASKETBALL	2	9	11
INDOOR TRACK	9	4	13
GOLF	8	7	15
TENNIS	5	10	15
FENCING	10	8	18
* Taken from Table 4-4			
** Taken from Table 4-6			

TABLE 4-8
POTENTIAL FOR SUCCESS - WOMEN

<u>SPORT</u>	<u>CONFERENCE CHAMPIONSHIPS</u>	<u>NATIONAL CHAMPIONSHIPS</u>	<u>TELEVISION COVERAGE</u>
WRESTLING	X	X	ABC
SWIMMING/DIVING	X	X	ABC
OUTDOOR TRACK	X	X	CBS
BASEBALL	X	X	ESPN
TENNIS	X	X	ESPN
INDOOR TRACK	X	X	ESPN
GYMNASTICS		X	CBS
SOCCER		X	ESPN
LACROSSE		X	ESPN
GOLF	X	X	F/ESPN*
CROSS COUNTRY	X	X	
WATER POLO		X	
RIFLE		X	
FENCING		X	
PISTOL		X**	
* FEATURE COVERAGE			
** Conducted by National Rifle Association			

TABLE 4-9
POTENTIAL FOR RECOGNITION - MEN

<u>SPORT</u>	<u>CONFERENCE CHAMPIONSHIPS</u>	<u>NATIONAL CHAMPIONSHIPS</u>	<u>TELEVISION COVERAGE</u>
BASKETBALL	X	X	ESPN
VOLLEYBALL	X	X	ESPN
GYMNASTICS		X	ESPN
SWIMMING/DIVING	X	X	F/ESPN*
OUTDOOR TRACK		X	F/ESPN*
INDOOR TRACK		X	F/ESPN*
TENNIS	X	X	
CROSS COUNTRY		X	
GOLF		DIV I	
FENCING		DIV I	
* FEATURE COVERAGE			

TABLE 4-10
POTENTIAL FOR RECOGNITION - WOMEN

<u>SPORT</u>	<u>CADET PART.</u>	<u>POTENTIAL SUCCESS</u>	<u>POTENTIAL RECOGNITION</u>	<u>TOTAL</u>
WRESTLING	6	2	1	9
OUTDOOR TRACK	7	6	1	14
SWIMMING/DIVING	4	10	1	15
SOCCER	3	4	8	15
BASEBALL	4	10	4	18
FENCING	1	6	12	19
GYMNASTICS	11	4	7	22
CROSS COUNTRY	10	1	11	22
LACROSSE	2	14	8	24
INDOOR TRACK	8	14	4	26
WATER POLO	9	6	12	27
GOLF	15	3	10	28
TENNIS	14	13	4	31
PISTOL	13	6	12	31
RIFLE	11	10	12	33

Data taken from Tables 4-1, 4-7, 4-9

TABLE 4-11
VALUE AND BENEFITS - MEN

<u>SPORT</u>	<u>CADET PART.</u>	<u>POTENTIAL SUCCESS</u>	<u>POTENTIAL RECOGNITION</u>	<u>TOTAL</u>
VOLLEYBALL	4	3	1	8
OUTDOOR TRACK	1	2	5	8
SWIMMING/DIVING	3	4	4	11
BASKETBALL	6	6	1	13
INDOOR TRACK	2	7	5	14
GYMNASTICS	6	5	3	14
CROSS COUNTRY	5	1	8	14
TENNIS	8	9	7	24
GOLF	9	8	9	26
FENCING	10	10	9	29

Data taken from Tables 4-2, 4-8, 4-10

TABLE 4-12
VALUE AND BENEFITS - WOMEN

Chapter Five

FINDINGS AND RECOMMENDATIONS

Findings

Thus far, the data presented in Chapters 2, 3, and 4 have been considered independently. To provide a comprehensive analysis, the three categories -- cost effectiveness, availability of competition, and value and benefits -- are combined. In all three categories each sport is ranked, 1-15 for men and 1-10 for women, with one being the best ranking. All ties are given the same ranking. Therefore, when the rankings are added, the lowest total represents the best overall ranking. The results are shown in Table 5-1 for men and 5-2 for women.

A close look at the final results for men's sports reveals several findings. First, the sports that ranked near the top, overall, ranked relatively consistently across all three categories. In fact, the top six sports -- cross country, outdoor track, wrestling, swimming/diving, soccer, and baseball -- ranked in the top 33 percent in two out of three categories. This indicates that these sports ranked high despite being evaluated against a variety of criteria. It follows, that these six sports form a solid foundation for the men's intercollegiate program.

On the other hand, there are seven sports that ranked in the bottom 33 percent in at least two out of three categories; indoor track, golf, tennis, gymnastics, rifle, water polo, and pistol. The other two sports, fencing and lacrosse, fall in the center, primarily as a result of a high ranking in cadet participation.

The final results of the women's sports point out similar consistencies. The top six sports -- volleyball, outdoor track, cross country, indoor track, swimming/diving, and basketball ranked in the top half in two out of three cases. This indicates a solid core of intercollegiate teams. The bottom two sports, golf and fencing, ranked poorly in all three categories. The other two sports, tennis and gymnastics, ranked in the top half in only one category.

An analysis of these findings does not provide concrete conclusions that lead to clear cut recommendations. Applying a rank order to the different factors causes some skewing of results that could lead to false conclusions. Also, the subjectivity of certain data inherently leaves room for opposing viewpoints. Despite these limitations, the findings provide a broad framework for determining how each sport compares to the others. Final

recommendations on which sports should be offered are directly affected by external factors and constraints balanced with the goals and objectives of the department.

The external factor currently receiving the most attention, and likely to impact all military programs in the very near future, is a budget reduction. The potential for this factor to drive management decisions may require giving more importance to the cost effectiveness data compiled in this study. If so, a weighted factor applied to the cost effectiveness category would provide more useful information. To illustrate this, cost effectiveness was considered twice as important as the other categories. The results of applying this weighted factor are shown in Tables 5-3 and 5-4 for men and women, respectively. This example is only one illustration of how weighted factors could apply, depending on external constraints and/or changes in priorities. In the end, all factors must be examined to arrive at the best management decisions.

Recommendations

Based on these findings, several changes are recommended. First, the data supports eliminating some sports from the program. Critical to making this decision is how will it contribute to attaining the stated goals and objectives? Since the goals and objectives are not static but constantly revised and updated, they receive different priority over time. The challenges to managing this program and making the right decisions are to balance these goals and objectives with the external constraints to provide a competitive and representative intercollegiate program.

The data compiled in this study supports eliminating teams from both men's and women's program. As previously discussed in the men's program, seven sports ranked in the bottom 33 percent in at least two out of three categories: indoor track, golf, tennis, gymnastics, rifle, water polo, and pistol. The data computed with a weighted factor for cost effectiveness shows the same results. However, three of these sports -- indoor track, golf, and tennis -- compete in the Western Athletic Conference and as such, are not recommended for elimination because of the Academy's commitment to support the conference.

The final decision to eliminate the other four sports -- gymnastics, rifle, water polo, and pistol -- must take into account how the reductions contribute to attaining the stated objectives. Also, consideration must be given to how this reduction impacts other department programs. Since each cadet is required to participate in either intercollegiates, intramurals, or club activities, the 77 cadets affected by this reduction must be absorbed into other programs. One solution to this problem is to put rifle and pistol under the control of the Commandant of Cadets, and continue to have them compete on the intercollegiate level. In many schools throughout the country these teams compete and are funded by R.O.T.C. detachments. This transfer of responsibility would be beneficial to the athletic department and still provide the cadets with competitive opportunities.

Several problems exist in gymnastics and water polo that support eliminating them from the program. Although gymnastics does not have a large budget, it requires extensive facility support man hours, is restricted by a lack of available competition, and does not have conference competition. However, there is one drawback to this recommendation that deserves attention. Gymnastics is a mandatory physical education course and the intercollegiate coaches are critical in training other personnel and manning this course. Deleting the intercollegiate program will present a void in skilled instructors which must be filled by other department personnel. The main factors that cause problems in conducting water polo are the lack of regional competition and geographical restrictions of the sport. This requires a fairly high budget due to travel expenses. Also, the lack of an available pool of talent at the high school level is a disadvantage. Eliminating these four men's sports equates to a 9.4 percent reduction in cadet participation and a 20 percent reduction in the total nonrevenue budget. Additionally, six coaching positions would be available to assign to other sports.

In regards to the women's program, two sports -- fencing and golf -- are recommended for elimination. These sports total 10.7 percent of women participants and 12.6 percent of the budget. There is no gain in coaching positions because the fencing coach is shared with the men's team and the golf coach is not assigned to the athletic department. As discussed for the men's teams, the final decision to eliminate these sports must consider the impact on the other programs and whether these reductions contribute to attaining the stated objectives.

The second change is to add a sport to the nonrevenue program. All men's and women's sports that compete on a national level, but not at the Academy, were examined. In the men's program, no suitable sports were found that would improve the present program. Volleyball and field hockey are the most likely but suffer similar problems as present Academy teams, namely, availability of competition and geographic restrictions. In examining women's sports, however, softball was found to be a rapidly expanding sport worthy of serious consideration. It is an NCAA sanctioned sport, presently sponsored by 68 percent of Division II institutions. If offered at the Academy, it would be ranked fifth in terms of regional and national competition. Based on these factors, it is recommended for addition to the women's program.

In summary, the decision on which sports provide a balanced, representative intercollegiate program that meets the institution's stated objectives is an extremely difficult one. It is imperative that a comprehensive analysis of all applicable factors be conducted in as objective manner as possible. Unavoidably, however, subjectiveness enters the equation, and personal opinion and experience become factors. Final decisions must match programs with a clear purpose statement in an attempt to attain the stated department objectives.

<u>SPORT</u>	<u>COST EFFECTIVE</u>	<u>AVAILABLE COMPETITION</u>	<u>VALUE/ BENEFIT</u>	<u>TOTAL EQUAL WEIGHT</u>
CROSS COUNTRY	2	1	7	10
OUTDOOR TRACK	7	4	2	13
WRESTLING	5	8	1	14
SWIMMING/DIVING	6	7	3	16
SOCCER	4	9	3	16
BASEBALL	10	5	5	20
FENCING	3	14	6	23
LACROSSE	1	13	9	23
INDOOR TRACK	11	6	10	27
GOLF	13	3	12	28
TENNIS	15	2	13	30
GYMNASTICS	14	11	7	32
RIFLE	8	10	15	33
WATER POLO	12	12	11	35
PISTOL	9	15	13	37

TABLE 5-1
COMPARATIVE ANALYSIS - MEN
(EQUALLY WEIGHTED)

<u>SPORT</u>	<u>COST EFFECTIVE</u>	<u>AVAILABLE COMPETITION</u>	<u>VALUE/ BENEFIT</u>	<u>TOTAL EQUAL WEIGHT</u>
VOLLEYBALL	4	1	1	6
OUTDOOR TRACK	1	5	1	7
CROSS COUNTRY	2	4	5	11
INDOOR TRACK	3	6	5	14
SWIMMING/DIVING	5	7	3	15
BASKETBALL	10	2	4	16
TENNIS	6	3	8	17
GYMNASTICS	9	8	5	22
GOLF	7	9	9	25
FENCING	8	10	10	28

TABLE 5-2
COMPARATIVE ANALYSIS - WOMEN
(EQUALLY WEIGHTED)

<u>SPORT</u>	<u>COST EFFECTIVE</u>	<u>AVAILABLE COMPETITION</u>	<u>VALUE/ BENEFIT</u>	<u>TOTAL COST EFFECTIVE x 2</u>
CROSS COUNTRY	2	1	7	12
WRESTLING	5	8	1	19
OUTDOOR TRACK	7	4	2	20
SOCCER	4	9	3	20
SWIMMING/DIVING	6	7	3	22
LACROSSE	1	13	9	24
FENCING	3	14	6	26
BASEBALL	10	5	5	30
INDOOR TRACK	11	6	10	38
GOLF	13	3	12	41
RIFLE	8	10	15	41
TENNIS	15	2	13	45
GYMNASTICS	14	11	7	46
PISTOL	9	15	13	46
WATER POLO	12	12	11	47

TABLE 5-3
COMPARATIVE ANALYSIS - MEN
(COST EFFECTIVENESS x 2)

<u>SPORT</u>	<u>COST EFFECTIVE</u>	<u>AVAILABLE COMPETITION</u>	<u>VALUE/ BENEFIT</u>	<u>TOTAL COST EFFECTIVE x 2</u>
OUTDOOR TRACK	1	5	1	8
VOLLEYBALL	4	1	1	10
CROSS COUNTRY	2	4	5	13
INDOOR TRACK	3	6	5	17
SWIMMING/DIVING	5	7	3	20
TENNIS	6	3	8	23
BASKETBALL	10	2	4	26
GYMNASTICS	9	8	5	31
GOLF	7	9	9	32
FENCING	8	10	10	36

TABLE 5-4
COMPARATIVE ANALYSIS - WOMEN
(COST EFFECTIVENESS x 2)

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